

# Andrei Stefanescu

## *Curriculum Vitae*

### Personal Data

Phone: +12178192930

Email: [stefane1@illinois.edu](mailto:stefane1@illinois.edu)

### Interests

Formal Methods

Program Verification

Automated Theorem Proving

Programming Languages Semantics

### Projects

- MatchC** Matching logic program verifier for C  
<http://matching-logic.org/index.php/Special:MatchCOnline>
- SMTMaude** SMT-LIB extension for Maude rewrite engine

### Education

- 2009-present** *Ph.D., University of Illinois at Urbana-Champaign, Department of Computer Science, Formal Systems Laboratory*
- 2005-2009** *B.S., University "Politehnica" Bucharest, Faculty of Automatic Control and Computer Science, Romania*  
Computer Science Major  
GPA: 9.29/10 Major GPA: 9.62/10 Top 5% of the class  
Thesis: "Runtime software verification using separation logic"
- 2001-2005** *National College for Computer Science "Tudor Vianu", Bucharest, Romania*  
GPA: 9.7/10 Baccalaureate: 9.89/10
- 2006-2007** *Cisco Networking Academy Program*  
CCNA certification (Cisco Certified Network Associate)  
CCNP-BSCI (Building Scalable Cisco Internetworks)

### Publications

- LICS'13** Grigore Rosu, Andrei Stefanescu, Stefan Ciobaca and Brandon Moore. "Reachability Logic". Proceedings of the 28<sup>th</sup> *Symposium on Logic in Computer Science (LICS)*, New Orleans, LA, 25-28 June 2013. IEEE, to appear.

<b>PLDI'13</b>	Xiaokang Qiu, Pranav Garg, Andrei Stefanescu and Parthasarathy Madhusudan. "Natural Proofs for Structure, Data, and Separation". Proceedings of the 34 <sup>th</sup> <i>Conference on Programming Language Design and Implementation (PLDI)</i> , Seattle, WA, 16-22 June 2013. ACM, to appear.
<b>OOPSLA'12</b>	Grigore Rosu and Andrei Stefanescu. "Checking Reachability using Matching Logic". Proceedings of the 27 <sup>th</sup> <i>Conference on Object-Oriented Programming, Systems, Languages, and Applications (OOPSLA)</i> , Tucson, AZ, 21-25 October 2012. ACM, pages 555-574. Acceptance rate 59/228 (25%).
<b>FM'12</b>	Grigore Rosu and Andrei Stefanescu. "Checking Reachability using Matching Logic". Proceedings of the 18 <sup>th</sup> <i>International Symposium on Formal Methods (FM)</i> , Paris, France, 27-31 August 2012. LNCS, volume 7436, pages 387-402. Acceptance rate 35/132 (26%).
<b>ICALP'12</b>	Grigore Rosu and Andrei Stefanescu. "Towards a Unified Theory of Operational and Axiomatic Semantics". Proceedings of the 39 <sup>th</sup> <i>International Colloquium on Automata, Languages and Programming (ICALP)</i> , Warwick, UK, 9-13 July 2012. LNCS, volume 7392, pages 351-363.
<b>POPL'12</b>	Parthasarathy Madhusudan, Xiaokang Qiu and Andrei Stefanescu. "Recursive Proofs for Inductive Tree Data-Structures". Proceedings of the 39 <sup>th</sup> <i>Symposium on Principles of Programming Languages (POPL)</i> , Philadelphia PA, 25-27 January 2012. ACM, pages 123-136, 2012. Acceptance rate 44/205 (21%).
<b>ICSE'11</b>	Grigore Rosu and Andrei Stefanescu. "Matching Logic: A New Program Verification Approach". Proceedings of the 33 <sup>rd</sup> <i>International Conference on Software Engineering (ICSE'11) - New Ideas and Emerging Results Track</i> , Honolulu, HI, 21-28 May 2011. ACM, pages 868-871, 2011. Acceptance rate for the NIER track 46/198 (23%).
<b>UV'10</b>	Grigore Rosu and Andrei Stefanescu. "Matching Logic: A New Program Verification Approach". NSF/Microsoft workshop on Usable Verification (UV'10), Redmond, WA, 15-16 November 2010. Position paper. There were no submissions to UV'10; all talks were invited.

## Positions

<b>Summer 2010</b>	<i>International Fellow, Stanford Research Institute (SRI)</i> Developed benchmarks for a parallel rewrite engine
<b>Mar-Aug 2009</b>	<i>Research intern at National University of Singapore, School of Computing</i> Offered a research internship for the graduation project by the National University of Singapore Thesis: "Runtime software verification using separation logic"
<b>Summer 2008</b>	<i>Visiting student at University of Urbana-Champaign, Formal Systems Laboratory</i> Collaborated on the jPredictor project at the static analysis and program slicing modules
<b>Summer 2008</b>	<i>Grid Initiative, University "Politehnica" Bucharest, Romania</i> Developed serial and parallel optimizations for an HPC physics application computing magnetic field for nanowires

**Summer 2006**     *Microsoft Summer Workshop on Windows Presentation Foundation and .NET 3.0*  
 Designed and implemented a News Aggregator in Microsoft Visual Studio 2005 C# and .NET 3.0. (co-member of 4 person team)

## Awards and Distinctions

2009-2012	<b>Illinois Distinguished Fellowship</b>
2006	3rd place, Axway-Eestec Olympics (marathon 24 hour programming competition, 3 person team)
2005-2009	Merit Scholarship
2005	5th place, ACM, Polytechnic University of Bucharest's selection
2005	President of Romania's "Award of Excellence"
2005	<b>Silver Medal</b> , International Mathematical Olympiad, Merida, Mexico
2005	<b>Gold Medal</b> , Balkan Mathematical Olympiad, Iasi, Romania
2005	<b>1st place</b> , National Mathematical Olympiad, Romania
2005	best solution award, National Mathematical Olympiad, Romania
2004	<b>Silver Medal</b> , International Mathematical Olympiad, Athens, Greece
2003	<b>Silver Medal</b> , International Mathematical Olympiad, Tokyo, Japan
2003	<b>Silver Medal</b> , Balkan Mathematical Olympiad, Tirana, Albania
2002	6th place, National Computer Science Olympiad, Romania
2001	3rd place, National Mathematical Olympiad, Romania
1998-2005	Various prizes at national mathematical and computer science competitions

## Teaching

<b>Spring 2008</b>	<i>Department of Computer Science, University "Politehnica" Bucharest, Romania, undergraduate course Algorithm Design</i> Teaching Assistant for Associate Professor Vlad Posea. Taught weekly laboratory sections. Created slides and problem sets; advised student projects.
<b>Fall 2007</b>	<i>Department of Computer Science, University "Politehnica" Bucharest Romania, undergraduate course Usage of Operating Systems</i> Teaching Assistant for Associate Professor Razvan Rughinis. Taught weekly laboratory sections. Created slides, exam question sets, and a custom installing Ubuntu CD for usage in class.

## Committees

Scientific Committee, Romanian National Mathematical Olympiad (2006-2008)

## Spoken Languages

Romanian	native tongue
English	fluent
French	conversational